

US EPA RECORDS CENTER REGION 5



466390

Monthly Oversight Report 42  
ACS NPL Site  
Griffith, Indiana  
May 29, 2004 - June 25, 2004



# BLACK & VEATCH

101 N. Wacker Drive  
Suite 1100  
Chicago, Illinois 60606-7302

Tel: (312) 346-3775  
Fax: (312) 346-4781

Black & Veatch Special Projects Corp.

USEPA/RAC VII  
American Chemical Services RAO (057-ROBF-05J7)

BVSPC Project 46526  
BVSPC File C.3  
July 14, 2004

Mr. Kevin Adler  
U.S. Environmental Protection Agency  
77 W. Jackson Boulevard (SR-6J)  
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report  
No. 42 for June 2004

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 42 for June 2004 for the American Chemical Services Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email ([campbelllm@bv.com](mailto:campbelllm@bv.com)).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.  
Site Manager

Enclosure

t:\projects\acs-raos\corresp\let-051.doc

**Monthly Oversight Summary Report No. 42**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Month of June (May 29, 2004 - June 25, 2004).

**BVSPC O/S Dates:** June 2, 16, 17, and 24, 2004.

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	4	Respondent's General Contractor
U.S. Environmental Protection Agency	2	Federal Regulatory Agency
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
J+L	1	Vendor
Austgen	1	General Contractor
Eagle Services	3	ONCA SBPA ISVE System Specialty Contractor
Chicago Tank Lining	3	Tank Lining Contractor
Independent Environmental Services	2	Specialty Contractor
Simalabs	2	GWTP Sampling Contractor
Rockford Blacktop Co.	1	Potential Asphalt Bidder
Wilder Construction	1	Potential Asphalt Bidder
Walsh & Kelly	1	Potential Asphalt Bidder
CRA	3	Potential Site Operator
ELM	2	Potential Site Operator
Arcadis	2	Potential Site Operator
TRC	2	Potential Site Operator
LFR	2	Potential Site Operator
Breit	1	Potential Site Operator

## **Construction Activities**

### **Major Activities:**

- Eagle Services applied additional vacuum to the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system wells.
- Montgomery Watson Harza reported that the sulfuric acid tank in the groundwater treatment plant leaked from the inlet and outlet valves into its secondary containment.
- Chicago Tank Lining applied an epoxy coating to the inside of the Durr thermal oxidizer unit 1 scrubber.
- Independent Environmental Services removed the sludge from and replaced the shear pin for the sludge rake in the lamella clarifier.
- Austgen replaced the demister in tank T-102.
- Simalabs collected samples from the groundwater treatment plant on June 24, 2004, for routine process monitoring.
- Montgomery Watson Harza continued to operate the On-Site Containment Area Still Bottoms Pond Area and Off-Site Containment Area in-situ soil vapor extraction systems, processing vapors through the Global thermal oxidizer unit 2.
- Montgomery Watson Harza began evaluating the potential for vapor intrusion at the residence at Colfax Avenue and Reder Road.
- Montgomery Watson Harza held the Pre-bid meeting for the On-Site Containment Area Still Bottoms Pond Area final cover on June 2, 2004.
- The PRP group held a site meeting for outside consulting firms for future operation and maintenance contracts on June 2, 2004.
- Montgomery Watson Harza held biweekly construction coordination meetings at the site on June 3, 17, and 24, 2004.

### **Activities Performed:**

Montgomery Watson Harza (MWH) reported that it has proven out 21 wells in the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system. MWH also reported that five of the remaining wells contain product and nine of the wells contain high water levels. Eagle Services was onsite June 1 and 2, 2004, testing the 11 remaining wells that were not functioning properly by applying a high vacuum on the well. MWH reported that it also conducted additional vacuum testing on the nine wells that contained water to determine whether the vacuum applied was causing upwelling of the water and blocking the screen. Based on field observations, MWH determined that the vacuum applied did cause the water to come up in the well but not to the degree that the screens would be blocked. MWH also ordered groundwater pumps and a controller to install in the non-functioning vapor wells containing product. MWH plans to install the discharge tubing and electrical connection to the pump such that the liquid can be removed from the wells without its personnel being potentially exposed to vapors. MWH plans to transfer the liquid to a 55 gallon drum and subsequently transfer it to tank T-6 in the groundwater treatment plant (GWTP). MWH reported that it continues to evaluate the non-functioning wells and will have a plan of action in early July.

MWH reported that it observed a leak in the sulfuric acid tank in the GWTP on June 7, 2004. MWH initially transferred a small amount of the sulfuric acid into a 30 gallon tank for temporary storage. MWH

reported that by the end of the week of June 7, 2004, sulfuric acid was present in the secondary containment to a depth of 1 foot. MWH added sodium hydroxide to the sulfuric acid in the secondary containment in an attempt to neutralize the pH. The reaction released heat, and MWH then added water to the mixture to cool it. Black & Veatch Special Projects Corp. (BVSPC) asked MWH if the Operations and Maintenance (O&M) Manual for the GWTP addressed spill counter measures and response actions for cases such as the leak from the sulfuric acid tank. MWH reported that it did not review the O&M Manual prior to responding to the leaking tank. BVSPC suggested that MWH prepare a job hazard analysis to evaluate the health and safety issues associated with addressing the leaking sulfuric acid. MWH completed an incident form detailing the incident that occurred and the health and safety procedures that would be followed when mitigating the incident. MWH reported that its corporate health and safety officer suggested that it prepare a procedure for inclusion in the O&M Manual that specifies the actions that should be taken in the event of another acid leak.

✓ 2/6/0  
releases  
heat  
w/  
H<sub>2</sub>O<sub>4</sub>.

During the week of June 14, 2004, MWH rented several poly tanks to temporarily store the sulfuric acid. BVSPC expressed concern that the rental tanks did not have secondary containment. MWH subsequently installed secondary containment for the tanks during the week of June 21, 2004. MWH reported that it transferred approximately 4,000 gallons of diluted sulfuric acid from the leaking tank and its secondary containment into the temporary poly tanks. MWH also reported that it identified two leaks in the storage tank, one at the inlet valve and the second at the outlet valve, both located near the base of the tank. MWH is currently evaluating whether it will replace or repair the leak. MWH also reported that it is evaluating locations where it can either dispose of or recycle the diluted sulfuric acid.

Chicago Tank Lining (CTL) applied an epoxy coating to the inside of the Durr thermal oxidizer unit 1 scrubber on June 16 and 17, 2004. CTL personnel donned level B personal protective equipment (PPE) for the work inside the scrubber unit. MWH also filled out a confined space entry permit prior to the work. CTL cleaned the interior of the scrubber by sand blasting and applied the epoxy coating on June 16, 2004. CTL proceeded to Holiday test the new coating inside the scrubber and detected a few pinholes in the coating. CTL hand-applied epoxy coating to these areas and demobilized from the site on June 17, 2004.

Independent Environmental Services (IES) was onsite on June 16 and 17, 2004, to remove the sludge from and to replace the shear pin for the sludge rake in the lamella clarifier. IES donned level C PPE during the repair work. IES also replaced the filter fabric on the sludge press on June 17, 2004. Austgen also replaced the demister in tank T-102 on June 16, 2004. MWH operated the GWTP during the reporting period at 25 to 30 gpm except for the approximately 6 hours on June 16, 2004, when IES cleaned and repaired the lamella clarifier. MWH reported that a leak in one of the granular activated carbon (GAC) vessels was observed during the week of May 31, 2004. MWH took the leaking vessel offline and began operating one GAC vessel only. Simalabs collected samples from the GWTP on June 24, 2004, for routine process monitoring.

MWH continued to operate the ONCA SBPA and Off-Site Containment Area (OFCA) ISVE systems, processing vapors through the Global thermal oxidizer unit 2. MWH reported that the ONCA SBPA ISVE system was shut down temporarily on May 31, 2004, because of a high water level in the condensate knockout tank. MWH reported that it pumped down the tank that day and resumed operating the system. MWH and Austgen revised the control programming logic for pumping the knockout tank on June 2, 2004.

MWH reported that the Global thermal oxidizer unit 2 was temporarily shut down on June 25, 2004, for routine maintenance.

MWH reported that it ordered the second blower for the OFCA ISVE system expansion. MWH also reported that it plans on using a moveable steel storage container to house the equipment for expanding the system to allow for versatility with using the expansion equipment on the ONCA SBPA ISVE system as necessary.

MWH proposed amending its *Performance Standard Verification Plan* (PSVP) to allow for qualitative monitoring of the ISVE systems using a photoionization detector (PID). Currently, the PSVP provides for qualitative monitoring with a flame ionization detector (FID). MWH reported that the FID has become unreliable and that the PID will be sufficient for the purpose of a qualitative evaluation of the system performance. MWH submitted a memorandum to the Agencies requesting approval of the amendment on June 16, 2004.

MWH reported that the sampling results from the chemical oxidation treatability study in the South Area indicated that the smear zone extends to areas surrounding the house located at the corner of Reder Road and Colfax Avenue. MWH reported that it is following EPA guidance to evaluate the potential for vapor intrusion into the basement of the residence. MWH reported that it has received approval from the PRP group to collect soil gas samples in the vicinity of the residence.

On Wednesday, June 2, 2004, MWH held a Pre-bid meeting for the ONCA SBPA final asphalt cover. MWH reported that 5 foot by 5 foot concrete pads will be installed around the ONCA SBPA ISVE system wells as part of the final cover to aid in the placement of the asphalt and to provide easy access for any future work at ISVE wells. MWH reported that the concrete pads would be easier to replace should maintenance or investigation activities at the wells require digging into the cap. MWH also reported that additional grading and compaction will be required for the aggregate currently placed on the SBPA prior to installation of the asphalt. MWH reported that this preparation work is scheduled to be completed in July.

The PRP group held a site meeting on June 2, 2004, for outside consulting firms for future O&M contracts. MWH held the biweekly construction coordination meeting via conference call on June 3, 2004. MWH held two biweekly construction coordination meetings at the site on June 17 and 24, 2004.

Attached are BVSPC weekly reports No. 170 through 173, correspondence, log book notes, and photographs of the daily activities. BVSPC's crew conducted oversight of the major field activities on June 2, 16, 17, and 24, 2004. BVSPC's crew attended two construction coordination meetings at the site on June 17 and 24, 2004. BVSPC participated in the biweekly construction coordination meeting held on June 3, 2004, via conference call.

**Topics of Concern:**

- Air monitoring activities during Eagle Services work vacuuming the ONCA SBPA ISVE system wells were not clearly established with respect to volatile organic compounds.

- The sulfuric acid tank in the GWTP leaked into its secondary containment. BVSPC expressed concern that a job hazard analysis had not been prepared or evaluated for the work of transferring the acid and cleaning the leaking tank.

**Concern Resolution:**

- MWH reported that it will evaluate procedures that were established for other work activities and determine an appropriate monitoring plan for future activities related to the ONCA SBPA ISVE system wells.
- MWH began transferring the leaked and diluted sulfuric acid into poly tanks for temporary storage. MWH completed an incident form detailing the incident that occurred and the health and safety procedures that would be followed when mitigating the incident.

**Upcoming Activities:**

- MWH to replace the heat exchanger for the Durr thermal oxidizer unit 1.
- MWH to expand the OFCA ISVE system.
- MWH to continue proving out the ONCA SBPA ISVE system wells.
- MWH to continue operating the OFCA and the ONCA SBPA ISVE systems.
- MWH to place the wood chips in the wetland paths to the monitoring wells.
- MWH to evaluate soil vapor intrusion into the house basement resulting from the smear zone in the South Area.
- MWH to investigate benzene levels in the lower aquifer in the wetlands area.

Signature: Larry Campbell

Date: July 13, 2004

*t:\projects\acs-raos\osr\2004\06\Mo42.wpd*

**Weekly Oversight Summary Report No. 170**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of May 31, 2004.  
**BVSPC O/S Dates:** June 2, 2004 (Mr. Campbell).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	4	Respondent's General Contractor
U.S. Environmental Protection Agency	2	Federal Regulatory Agency
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
J+L	1	Vendor
Austgen	1	General Contractor
Eagle Services	3	ONCA SBPA ISVE System Specialty Contractor
CRA	3	Potential Site Operator
ELM	2	Potential Site Operator
Arcadis	2	Potential Site Operator
TRC	2	Potential Site Operator
LFR	2	Potential Site Operator
Breit	1	Potential Site Operator
Rockford Blacktop Co.	1	Potential Asphalt Bidder
Wilder Construction	1	Potential Asphalt Bidder
Walsh & Kelly	1	Potential Asphalt Bidder

**Construction Activities**

**Major Activities:**

- Montgomery Watson Harza held the Pre-bid meeting for the On-Site Containment Area Still Bottoms Pond Area final cover on June 2, 2004.
- Eagle Services applied additional vacuum to the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system wells.

- Montgomery Watson Harza proposed amending its *Performance Standard Verification Plan* to allow for qualitative monitoring of the in-situ soil vapor extraction systems using a photoionization detector.
- The PRP group held a site meeting for outside consulting firms for future operation and maintenance contracts.
- Montgomery Watson Harza held the biweekly construction coordination meeting via conference call on June 3, 2004.

### **Activities Performed:**

On Wednesday, June 2, 2004, Montgomery Watson Harza (MWH) held a Pre-bid meeting for the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) final asphalt cover. MWH reported that 5 foot by 5 foot concrete pads will be installed around the ONCA SBPA in-situ soil vapor extraction (ISVE) system wells as part of the final cover to aid in the placement of the asphalt and to provide easy access for any future work at ISVE wells. MWH reported that the concrete pads would be easier to replace should maintenance or investigation activities at the wells require digging into the cap. MWH also reported that additional grading and compaction will be required for the aggregate currently placed on the SBPA prior to installation of the asphalt. MWH reported that this preparation work is scheduled to be completed in July.

MWH reported that it has proven out 21 wells in the ONCA SBPA ISVE system to date. MWH also reported that five of the remaining 25 wells contain product and that it is evaluating extraction options for these wells. Eagle Services was onsite June 1 and 2, 2004, to apply vacuum at 11 of the wells that have not been proven functional. MWH reported that the remaining nine wells had high water levels that prohibited them from being tested by Eagle Services. MWH reported that it will evaluate the results of the testing and make conclusions with regard to future action at the non-functioning wells.

MWH reported that it continued to operate the ONCA SBPA and Off-Site Containment Area (OFCA) ISVE systems, processing vapors through the Global thermal oxidizer unit 2. MWH reported that the ONCA SBPA ISVE system was shut down temporarily on May 31, 2004, because of a high water level in the condensate knockout tank. MWH reported that it pumped down the tank that day and resumed operating the system. MWH and Austgen revised the control programming logic for pumping the knockout tank on June 2, 2004.

MWH reported that it ordered the second blower for the OFCA ISVE system expansion. MWH reported that it plans on using a moveable steel storage container to house the equipment for expanding the system to allow for versatility with using the expansion equipment on the ONCA SBPA ISVE system as necessary.

MWH proposed amending its *Performance Standard Verification Plan* (PSVP) to allow for qualitative monitoring of the ISVE systems using a photoionization detector (PID). Currently, the PSVP provides for qualitative monitoring using a flame ionization detector (FID). MWH reported that the FID has become unreliable and that the PID will be sufficient for the purpose of a qualitative evaluation of the system performance.

MWH continued to operate the groundwater treatment plant (GWTP) at 25 gpm. MWH reported that it observed a leak in the one of the granular activated carbon (GAC) vessels in the GWTP. MWH took the leaking vessel offline and began operating one GAC vessel only. MWH reported that one of its vendors, J+L, supplied hoses to the GWTP on June 2, 2004.

The PRP group held a site meeting on June 2, 2004, for outside consulting firms for future operation and maintenance contracts. MWH held the biweekly construction coordination meeting via conference call on June 3, 2004.

**Topics of Concern:**

- Air monitoring activities during Eagle Services work vacuuming the ONCA SBPA ISVE system wells were not clearly established with respect to volatile organic compounds.

**Concern Resolution:**

- MWH reported that it will evaluate procedures that were established for other work activities and determine an appropriate monitoring plan for future activities related to the ONCA SBPA ISVE system wells.

**Upcoming Activities:**

- MWH to line the Durr thermal oxidizer unit 1 scrubber to prevent corrosion and replace the heat exchanger.
- MWH to expand the OFCA ISVE system.
- MWH to continue proving out the ONCA SBPA ISVE system wells.
- MWH to continue operating the OFCA and the ONCA SBPA ISVE systems.
- MWH to place the wood chips in the wetland paths to the monitoring wells.
- MWH to investigate benzene levels in the lower aquifer in the wetlands area.

Signature: Leigh Peters

Date: July 9, 2004

*t:\projects\acs-raos\osr\2004\06\0531.wpd*

**FAX****RECEIVED****MWH**

MONTGOMERY WATSON HARZA

**JUN 08 2004****L. M. CAMPBELL**175 W Jackson Blvd  
Suite 1900  
Chicago, IL 60604  
Tel: 630-831-3000  
Fax: 630-831-3021

Date: 8-Jun-04

**TO: Construction Meeting Minutes Distribution List****Fax Number**

X	Kevin Adler; U.S. EPA	(312) 353-5541
X	Prabhakar Kasarabada; IDEM	(317) 234-0428
X	Barbara Magel; Karaganis White & Magel, Ltd.	(312) 836-9083
X	Mark Travers; Environ	(312) 853-9025
X	Larry Campbell; Black & Veatch	(312) 346-4781
X	Leigh Peters; Black & Veatch	(312) 346-4781
X	Todd Lewis; MWH	(312) 831-3498
X	Rob Adams; MWH	(312) 831-3021
X	Lee Orosz; MWH	(219) 924-4561
X	Joe Adams; MWH	(303) 410-4100
X	Jon Pohl; MWH	(312) 831-3021
X	Chris Daly; MWH	(312) 831-3021

From: Peter Vagt

Following please find the minutes from the June 3, 2004 Construction Meeting.

The next meeting is scheduled for 10:00 AM on Thursday June 17, 2004 at the construction trailer at the ACS Site.

If you would like a copy of these minutes or future minutes sent via e-mail please let us know.

If you do not receive all pages, or if there are any problems with this transmission, please call (312) 831-3431  
Number of pages, including cover: 4

**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR JUNE 3, 2004 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** Thursday, June 3, 2004

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** MWH Chicago Office

**ATTENDEES:** Kevin Adler – U.S. EPA  
Leigh Peters – BVSPC  
Pete Vagt – MWH  
Todd Lewis - MWH  
Rob Adams – MWH  
Chris Daly – MWH  
Jon Pohl – MWH  
Chad Smith – MWH  
Matthew Mesarch - MWH  
Amy Clorc - MWH

**TOPICS:**

Health and Safety Summary

There have been no Health and Safety issues at the ACS Site since the last meeting on May 20<sup>th</sup>. Activities conducted since the last meeting included vacuum testing of Still Bottoms Pond Area (SBPA) In-Situ Soil Vapor Extraction (ISVE) wells, operation of the Groundwater Treatment Plant (GWTP), and operation of the Off-Site Area ISVE system and the SBPA ISVE system.

Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating at approximately 25 gallons per minute (gpm). A small leak was observed in one of the two carbon vessels. It has been taken offline while the cause of the leak is investigated and repaired. There is sufficient capacity in the remaining carbon vessel to continue operation of the GWTP. The carbon vessel will be brought back online once the leak is repaired. There have been no other issues with the GWTP.

Off-Site Area/SBPA ISVE Systems

Thermal Oxidizer/Scrubber Unit 2 (Therm Ox 2) has been operating with no issues since the last meeting on May 20<sup>th</sup>.

The new heat exchanger for Thermal Oxidizer/Scrubber Unit 1 (Therm Ox 1) will be ordered either June 3<sup>rd</sup> or June 4<sup>th</sup>. The new heat exchanger will have the same dimensions and the same configuration as the previous unit but will be constructed of Hastelloy, which will provide improved resistance to corrosion. Chicago Tank Lining has been contacted regarding epoxy coating the internal components of the scrubber unit. It is anticipated that this work will be performed in the next three weeks.

The order for a new blower for the Off-Site Area ISVE expansion will be placed either June 3<sup>rd</sup> or June 4<sup>th</sup>. MWH has decided to use a steel container, similar to a freight container, to house the expansion equipment. The use of the container will allow for increased flexibility in the future when the equipment may be needed elsewhere on the Site.

MWH continues to prove-out wells in the SBPA ISVE area. To date, 21 wells have been proven out using the same procedure and criteria used for well prove-out of the Off-Site ISVE system. Five wells could not be proven because they contained free product, which obstructs the testing of vapor flow through the well screens. MWH will contact oil and product removal experts within the company to evaluate retrofitting these wells for product recovery wells. The other 20 unproven ISVE wells were pressure tested for airflow on the 25<sup>th</sup> and 26<sup>th</sup> of May. Results indicated that air could be pushed through all well screens. On June 2<sup>nd</sup> 11 of these wells were vacuum tested from the top of well. The data is currently being processed and a summary will be made at the next meeting. The remaining nine wells could not be vacuum tested due to high water levels in the wells.

The SBPA ISVE system was shut down on May 31<sup>st</sup> when a high level in the system knockout tank was reached. An investigation indicated that the high level was caused by an issue in the program logic. The knockout tank was pumped down and brought back online the same day and the program logic was updated on June 2<sup>nd</sup>.

To date, MWH has been performing process monitoring of the ISVE systems using a flame ionization detector/photoionization detector (FID/PID) instrument. This meets the requirements of the Performance Standards Verification Plan (PSVP), which indicates that a FID should be used. However, the FID has inherent operational problems that effect data quality and consistency in monitoring environments similar to the ISVE well monitoring. In some instances, measurements could not be collected due to FID operational errors. Therefore, MWH recommends performing process monitoring using a PID instrument. The PID will provide adequately consistent readings. The method for collecting compliance data will not be affected by this change. A memo proposing this modified data collection method will be submitted to the Agencies.

Lower Aquifer Plume Investigation

The work plan for the Lower Aquifer Plume Investigation was submitted to the Agencies on May 21<sup>st</sup>. It is anticipated that the work will be in July or August when the surface water levels in the wetland will be lower, allowing easier access to the proposed drilling locations.

Final SBPA Cap

Pavement contractors were onsite June 2<sup>nd</sup> for a site walk for the final SBPA cover. Final grading work needs to occur before the pavement starts. The final grading will include grading the gravel to 0.5 inch and compaction.

Chemical Oxidation Application

The post-application groundwater and soil sampling event took place between May 24<sup>th</sup> and 28<sup>th</sup>. Additional delineation sampling showed that the extent of contaminant is larger than originally anticipated. MWH is currently waiting on the lab results. A report summarizing the sampling results and future recommendations will be sent within about four weeks.

Look Ahead Schedule

June 4, 2004 through June 17, 2004	<ul style="list-style-type: none"><li>• Off-Site ISVE system and SBPA ISVE system operation</li><li>• GWTP/BWES/PGCS operation and routine maintenance</li><li>• Routine maintenance of the GWTP</li></ul>
Health and Safety Items to Monitor	<ul style="list-style-type: none"><li>• Safety issues associated with ISVE well dewatering</li></ul>

Next Construction Meeting – Thursday, June 17, 2004, 10 AM

ALC/DP/PJV/RAA

J:\209\0601 ACS\0202 MWA PM\Meeting Minutes 2004\Meeting Minutes 06/03/04.doc

**Weekly Oversight Summary Report No. 171**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of June 7, 2004.

**BVSPC O/S Dates:** Cancelled because of limited site activities.

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	1	Respondent's General Contractor

**Construction Activities**

**Major Activities:**

- Montgomery Watson Harza reported that the sulfuric acid tank in the groundwater treatment plant began leaking into its secondary containment.
- Montgomery Watson Harza conducted additional vacuum testing on the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system wells that contained water.

**Activities Performed:**

Montgomery Watson Harza (MWH) reported that it observed a leak in the sulfuric acid tank in the groundwater treatment plant (GWTP) on June 7, 2004. MWH transferred a small amount of the sulfuric acid into a 30 gallon tank for temporary storage. MWH reported that by the end of the week sulfuric acid had leaked from the tank into the secondary containment to a depth of 1 foot. MWH added sodium hydroxide to the sulfuric acid in the secondary containment in an attempt to neutralize the pH. The reaction released heat, and MWH then added water to the mixture to cool it. MWH decided to leave the diluted sulfuric acid in the secondary containment until it could locate temporary poly tanks for storage of the acid. MWH reported that it will be able to evaluate the source of the leak after the acid is removed from the secondary containment and the tank.

MWH reported that it conducted additional vacuum testing on the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction system (ISVE) wells that contained water to determine if upwelling of the water was causing the screens to be saturated. Based on field observations, MWH determined that the vacuum applied did cause the water to come up in the well but not to the degree that the screens would be blocked. MWH reported that it will continue to evaluate the data that it has collected to determine a corrective action for the non-functioning wells.

MWH continued to operate the ONCA SBPA and Off-Site Containment Area (OFCA) ISVE systems, processing vapors through the Global thermal oxidizer unit 2. MWH reported that Chicago Tank Lining will be onsite next week to apply an epoxy coating to the interior of the Durr thermal oxidizer unit 1 scrubber for chemical resistance. MWH operated the GWTP at 25 gpm. MWH reported that the GWTP

does not use a significant amount of sulfuric acid and will not be interrupted by the leak in the sulfuric acid tank.

**Topics of Concern:**

- Air monitoring activities during Eagle Services work vacuuming the ONCA SBPA ISVE system wells were not clearly established with respect to volatile organic compounds.
- The sulfuric acid tank in the GWTP leaked into the secondary containment.

**Concern Resolution:**

- MWH reported that it will evaluate procedures that were established for other work activities and determine an appropriate monitoring plan for future activities related to the ONCA SBPA ISVE system wells.
- MWH reported that it will locate poly tanks for temporary storage of the sulfuric acid.

**Upcoming Activities:**

- Chicago Tank Lining to line the Durr thermal oxidizer unit 1 scrubber to prevent corrosion.
- MWH to replace the heat exchanger for the Durr thermal oxidizer unit 1.
- MWH to expand the OFCA ISVE system.
- MWH to continue proving out the ONCA SBPA ISVE system wells.
- MWH to continue operating the OFCA and the ONCA SBPA ISVE systems.
- MWH to place the wood chips in the wetland paths to the monitoring wells.
- MWH to investigate benzene levels in the lower aquifer in the wetlands area.

Signature: Leigh Peters

Date: July 9, 2004

*t:\projects\acs-raos\osr\2004\06\0607.wpd*

**Weekly Oversight Summary Report No. 172**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of June 14, 2004.

**BVSPC O/S Dates:** June 16 and 17, 2004 (Mr. Campbell).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	1	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Chicago Tank Lining Company	3	Tank Lining Contractor
Independent Environmental Services	2	Specialty Contractor
Austgen	1	General Contractor

**Construction Activities**

**Major Activities:**

- Montgomery Watson Harza transferred sulfuric acid from the leaking acid tank and secondary containment to temporary tanks within the groundwater treatment plant.
- Chicago Tank Lining applied an epoxy coating to the inside of the Durr thermal oxidizer unit 1 scrubber.
- Independent Environmental Services removed the sludge and replaced the shear pin for the sludge rake in the lamella clarifier.
- Austgen replaced the demister in tank T-102.
- Montgomery Watson Harza began evaluating the potential for vapor intrusion at the residence at Colfax Avenue and Reder Road.
- Montgomery Watson Harza held the biweekly construction coordination meeting at the site on June 17, 2004.

**Activities Performed:**

Montgomery Watson Harza (MWH) brought a rented 2450 gal. poly tank into the groundwater treatment plant (GWTP) and pumped sulfuric acid from the secondary containment into the temporary tank for storage. Secondary containment was not provided for the rented poly tank. Black & Veatch Special Projects Corp. (BVSPC) asked MWH if the Operations & Maintenance (O&M) Manual for the GWTP addressed spill counter measures and response actions for a case such as the leak from the sulfuric acid tank. MWH reported that it did not review the O&M Manual prior to responding to the leak. BVSPC suggested that MWH prepare a job hazard analysis to evaluate the health and safety issues associated with

addressing the leaking sulfuric acid. MWH reported that it will prepare an evaluation of its proposed actions. BVSPC also expressed concern that the rented poly tank did not have secondary containment. MWH reported that it would get secondary containment for the rented tank and any additional tanks that it rents. MWH reported that once the acid has been removed from the leaking tank and its secondary containment, MWH will evaluate the source of the leak and determine whether the tank can be repaired.

Chicago Tank Lining (CTL) was onsite on June 16 and 17, 2004, to apply an epoxy coating to the Durr thermal oxidizer unit 1 scrubber. CTL personnel donned level B personal protective equipment (PPE) for the work inside the scrubber unit. MWH also filled out a confined space entry permit prior to the work. CTL cleaned the interior of the scrubber by sand blasting and applied the epoxy coating on June 16, 2004. CTL proceeded to Holiday test the new coating inside the scrubber and detected a few pin holes in the coating. CTL hand-applied epoxy coating to these areas and demobilized from the site on June 17, 2004.

Independent Environmental Services (IES) was onsite on June 16 and 17, 2004, to remove the sludge from and to replace the shear pin for the sludge rake in the lamella clarifier. IES donned level C PPE during the repair work. IES also replaced the filter fabric on the sludge press on June 17, 2004. Austgen replaced the demister in tank T-102 on June 16, 2004. MWH reported that it operated the GWTP at 30 gpm except for approximately 6 hours on June 16, 2004, while IES replaced the shear pin.

MWH continued to operate the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems, processing vapors through the Global thermal oxidizer unit 2. MWH reported that it continues to evaluate the ONCA SBPA ISVE system wells. MWH also reported that it will begin pumping from the wells that have recoverable product in them.

MWH proposed amending its *Performance Standard Verification Plan* (PSVP) to allow for qualitative monitoring of the ISVE systems using a photoionization detector (PID). MWH reported that it submitted a memorandum requesting approval of this amendment.

MWH reported that the sampling results from the chemical oxidation treatability study in the South Area indicated that the smear zone extends to areas surrounding the house located at the corner of Reder Road and Colfax Avenue. MWH reported that it is following EPA guidance to evaluate the potential for vapor intrusion into the basement of the residence. MWH reported that it may need to test the basement for vapors.

BVSPC attended the biweekly construction coordination meeting held at the site on June 17, 2004.

**Topics of Concern:**

- Air monitoring activities during Eagle Services work vacuuming the ONCA SBPA ISVE system wells were not clearly established with respect to volatile organic compounds.
- The sulfuric acid tank in the GWTP leaked into the secondary containment. BVSPC expressed concern that a job hazard analysis had not been prepared or evaluated for the work of transferring the acid and cleaning the leaking tank.

**Concern Resolution:**

- MWH reported that it will evaluate procedures that were established for other work activities and determine an appropriate monitoring plan for future activities related to the ONCA SBPA ISVE system wells.
- MWH began transferring the leaked and diluted sulfuric acid into poly tanks for temporary storage. MWH reported that it will prepare a job hazard analysis for the work.

**Upcoming Activities:**

- MWH to replace the solenoid valve for the activated sludge tank.
- MWH to replace the heat exchanger for the Durr thermal oxidizer unit 1.
- MWH to expand the OFCA ISVE system.
- MWH to continue proving out the ONCA SBPA ISVE system wells.
- MWH to continue operating the OFCA and the ONCA SBPA ISVE systems.
- MWH to place the wood chips in the wetland paths to the monitoring wells.
- MWH to evaluate possible soil vapor intrusion into the house basement resulting from the smear zone in the South Area.
- MWH to investigate benzene levels in the lower aquifer in the wetlands area.

Signature: Leigh Peters

Date: July 9, 2004

*t:\projects\acs-raos\osr\2004\06\0614.wpd*

**FAX****MWH**  
MONTGOMERY WATSON HARZA

Date: 22-Jun-04

JUN 22 2004

L.M. CAMPBELL

175 W Jackson Blvd  
Suite 1900  
Chicago, IL 60604  
Tel: 630-831-3000  
Fax: 630-831-3021**TO: Construction Meeting Minutes Distribution List****Fax Number**

X	Kevin Adler; U.S. EPA	(312) 353-5541
X	Prabhakar Kasarabada; IDEM	(317) 234-0428
X	Barbara Magel; Karaganis White & Magel, Ltd.	(312) 836-9083
X	Mark Travers; Environ	(312) 853-9025
X	Larry Campbell; Black & Veatch	(312) 346-4781
X	Leigh Peters; Black & Veatch	(312) 346-4781
X	Todd Lewis; MWH	(312) 831-3498
X	Rob Adams; MWH	(312) 831-3021
X	Lee Orosz; MWH	(219) 924-4561
X	Joe Adams; MWH	(303) 410-4100
X	Jon Pohl; MWH	(312) 831-3021
X	Chris Daly; MWH	(312) 831-3021

From: Peter Vagt

Following please find the minutes from the June 17, 2004 Construction Meeting.

The next meeting is scheduled for 10:00 AM on Thursday June 24, 2004 at the construction trailer at the ACS Site.

If you would like a copy of these minutes or future minutes sent via e-mail please let us know.

If you do not receive all pages, or if there are any problems with this transmission, please call (312) 831-3431  
Number of pages, including cover: 4

**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR JUNE 17, 2004 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** Thursday, June 17, 2004

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS

**ATTENDEES:** Kevin Adler – U.S. EPA  
Larry Campbell – BVSPC  
Pete Vagt – MWH  
Todd Lewis – MWH  
Mark Travers - Environ  
Rob Adams – MWH  
Chris Daly – MWH  
Jon Pohl – MWH  
Chad Smith – MWH  
Matthew Mesarch - MWH  
Amy Clore - MWH

**TOPICS:**

Health and Safety Summary

On June 7<sup>th</sup> a leak of sulfuric acid was observed in the secondary containment structure for the sulfuric acid storage tank inside the GWTP. The cause of the leak is currently under investigation. The leakage area is demarcated with caution tape to restrict access. The current proposed method of action is to pump the acid using an acid compatible pump and tubing to a temporary storage tank. Acid that cannot be pumped from the secondary containment structure to the temporary storage tank will be neutralized in place. Once the acid tank and secondary containment structure has been emptied, water will be added to identify the locations of any leaks. The leak(s) will be repaired if possible. If the leak(s) cannot be repaired, then the acid storage tank will be replaced. A Job Hazard Analysis (JHA) form will be completed by MWH to address potential health and safety issues that are associated with this work. The proper PPE will be worn by the personnel involved with the tank repair.

No other health and safety issues have occurred since the last meeting on June 3<sup>rd</sup>. Other activities at the site since the last meeting have included vacuum and pressure testing of Still Bottoms Pond Area (SBPA) In-Situ Soil Vapor Extraction (ISVE) wells, operation of the Groundwater Treatment Plant (GWTP), and operation of the Off-Site Area ISVE

system and the SBPA ISVE system. Chicago Tank Lining applied an epoxy coating to the internal components of the scrubber system. Proper level B personal protection equipment (PPE) was worn by workers and the appropriate confined space permit was provided. Independent Environmental Services (IES) was at the Site to remove the sludge from the Lamella clarifier. No health and safety issues arose while the work was completed.

#### Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating at approximately 30 gallons per minute (gpm). The system was shutdown June 16<sup>th</sup> for 6 hours due to a broken shear pin in the Lamella sludge holding tank. The tank was pumped out and the shear pin was replaced and the system was brought back online the same day. There have been no other issues with the GWTP.

#### Off-Site Area/SBPA ISVE Systems

Thermal Oxidizer/Scrubber Unit 2 (Therm Ox 2) has been operating with no issues since the last meeting on June 3<sup>rd</sup>.

The order was placed for the new heat exchanger for Thermal Oxidizer/Scrubber Unit 1 (Therm Ox 1) and it is expected to arrive July 31<sup>st</sup>. The old heat exchanger has been delivered to a fabrication facility for reconstruction work. A new knockout tank was ordered for Therm Ox 1 influent piping to remove residual condensate from the ISVE systems.

The order for the new blower system in the Off-Site Area ISVE expansion was placed and is expected to arrive at the Site in early July. Construction of the foundation for the blower containment structure is anticipated to start in the next two weeks followed by the installment of the new blower system components.

The SBPA ISVE area currently is extracting vapors from 12 wells. In the past two weeks vacuum testing was performed on 11 wells. Vacuum testing was also performed on wells that contained water to determine if water was "welling up" and submerging the well screens when vacuum is applied to the wells. The results indicated that the water levels in some ISVE wells did rise when the vacuum was applied, but not to the degree where the well screens were blocked for air passage. The data collected to date for evaluating the SBPA well field is being evaluated by MWH. The final version of the SBPA/ISVE Construction Completion Report (CCR) was sent to the Agencies on Monday, June 14<sup>th</sup>.

A memo detailing MWH's proposal for the use of a Photoionization detector (PID) for process monitoring was submitted to the Agencies June 16<sup>th</sup>. The new PID will replace the flame ionization detector/photoionization detector (FID/PID) unit previously used.

#### Final SBPA Cap

MWH received subcontractor bids for pavement of the final SBPA cover on June 11<sup>th</sup>. MWH is currently discussing technical issues with a selected bidder and should be ready

to award the job in the next week or two. Paving work is not expected to begin until at least the end of July. The gravel layer of the cover system will be re-graded and compacted before the placement of the pavement starts. Concrete pads will also be installed around the stick up wells before pavement begins.

#### Chemical Oxidation Application

During the chemical oxidation post-application sampling, delineation sampling indicated the water table smear zone may extend beyond the house located on the corner of Colfax Ave and Reder Rd. MWH will evaluate the potential for additional delineation and/or sampling. *Also concerns about dewatering in house on Reder Rd.*

#### Look Ahead Schedule

June 17, 2004 through June 24, 2004	<ul style="list-style-type: none"><li>• Off-Site ISVE system and SBPA ISVE system operation</li><li>• GWTP/BWES/PGCS operation and routine maintenance</li><li>• Pumping On-Site ISVE wells for fluid removal</li><li>• PSVP water level monitoring for the 2<sup>nd</sup> Quarter</li></ul>
Health and Safety Items to Monitor	<ul style="list-style-type: none"><li>• Safety issues associated with ISVE well dewatering</li><li>• Safety issues associated with the GWTP acid leak repairs</li><li>• Routine daily tailgate health and safety meetings</li></ul>

Next Construction Meeting – Thursday, June 24, 2004, 10 AM

ALC/DP/RAA/PTV

J:\2004\0601 ACS\0202 MWA PM\Meeting Minutes 2004\Meeting Minutes 06-17-04.doc

**Weekly Oversight Summary Report No. 173**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of June 21, 2004.

**BVSPC O/S Dates:** June 24, 2004 (Mr. Campbell).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	1	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Simalabs	2	GWTP Sampling Contractor
Austgen	1	General Contractor

**Construction Activities**

**Major Activities:**

- Montgomery Watson Harza continued to clean up the leaking sulfuric acid tank and its secondary containment.
- Simalabs collected samples from the GWTP for routine process monitoring.
- Montgomery Watson Harza held the biweekly construction coordination meeting at the site on June 24, 2004.

**Activities Performed:**

Montgomery Watson Harza (MWH) and Austgen completed pumping the sulfuric acid from the leaking tank and its secondary containment into temporary poly tanks located in the groundwater treatment plant (GWTP). MWH installed secondary containment for the temporary tanks. MWH reported that approximately 4,000 gallons of diluted acid have been transferred. MWH reported that it identified two leaks in the leaking storage tank, one at the inlet valve and the second at the outlet valve, both located near the base of the tank. MWH is currently evaluating whether it will replace or repair the tank. MWH reported that it is also evaluating locations where it can either dispose of or recycle the diluted sulfuric acid. MWH completed an incident form detailing the incident that occurred and the health and safety procedures that would be followed when mitigating the incident. MWH reported that its corporate health and safety officer suggested that it prepare a procedure for inclusion in the Operation & Maintenance Manual that specifies the actions that should be taken in the event of another acid leak.

MWH continued to operate the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems, processing vapors through the Global thermal oxidizer unit 2. MWH reported that the thermal oxidizer was shut down

temporarily on June 25, 2004, for routine maintenance. MWH continued to operate the GWTP at 30 gpm. Simalabs collected samples from the GWTP for routine process monitoring.

MWH ordered groundwater pumps and a controller to install in the non-functioning vapor wells containing product in the ONCA SBPA ISVE system. MWH plans to install the discharge tubing and electrical connection to the pump such that the liquid can be removed from the wells without its personnel being potentially exposed to vapors. MWH plans to transfer the liquid to a 55 gallon drum and subsequently transferring it to tank T-6 in the GWTP. MWH reported that it continues to evaluate the non-functioning wells and will have a plan of action by the next meeting.

MWH reported that the sampling results from the chemical oxidation treatability study in the South Area indicated that the smear zone extends to areas surrounding the house located at the corner of Reder Road and Colfax Avenue. MWH reported that it is following EPA guidance to evaluate the potential for vapor intrusion into the basement of the residence. MWH reported that it has received approval from the PRP group to collect soil gas samples in the vicinity of the residence.

BVSPC attended the biweekly construction coordination meeting held at the site on June 24, 2004.

**Topics of Concern:**

- Air monitoring activities during Eagle Services work vacuuming the ONCA SBPA ISVE system wells were not clearly established with respect to volatile organic compounds.
- The sulfuric acid tank in the GWTP leaked into the secondary containment. BVSPC expressed concern that a job hazard analysis had not been prepared or evaluated for the work of transferring the acid and cleaning the leaking tank.

**Concern Resolution:**

- MWH reported that it will evaluate procedures that were established for other work activities and determine an appropriate monitoring plan for future activities related to the ONCA SBPA ISVE system wells.
- MWH began transferring the leaked and diluted sulfuric acid into poly tanks for temporary storage. MWH completed an incident form detailing the incident that occurred and the health and safety procedures that would be followed when mitigating the incident.

**Upcoming Activities:**

- MWH to replace the heat exchanger for the Durr thermal oxidizer unit 1.
- MWH to expand the OFCA ISVE system.
- MWH to continue proving out the ONCA SBPA ISVE system wells.
- MWH to continue operating the OFCA and the ONCA SBPA ISVE systems.
- MWH to place the wood chips in the wetland paths to the monitoring wells.
- MWH to evaluate soil vapor intrusion into the house basement resulting from the smear zone in the South Area.
- MWH to investigate benzene levels in the lower aquifer in the wetlands area.

Signature: Leigh Peters

Date: July 9, 2004

*E:\projects\acs-raos\osr\2004\06\06214.wpd*

**FAX****MWH**  
MONTGOMERY WATSON HARTZ**RECEIVED****JUN 29 2004****L. M. CAMPBELL**

Date: 29-Jun-04

175 W Jackson Blvd  
Suite 1900  
Chicago, IL 60604  
Tel: 630-831-3000  
Fax: 630-831-3021**TO: Construction Meeting Minutes Distribution List****Fax Number**

X	Kevin Adler; U.S. EPA	(312) 353-5541
X	Prabhakar Kasarabada; IDEM	(317) 234-0428
X	Barbara Magel; Karaganis White & Magel, Ltd.	(312) 836-9083
X	Mark Travers; Environ	(312) 853-9025
X	Larry Campbell; Black & Veatch	(312) 346-4781
X	Leigh Peters; Black & Veatch	(312) 346-4781
X	Todd Lewis; MWH	(312) 831-3498
X	Rob Adams; MWH	(312) 831-3021
X	Lee Orosz; MWH	(219) 924-4561
X	Joe Adams; MWH	(303) 410-4100
X	Jon Pohl; MWH	(312) 831-3021
X	Chris Daly; MWH	(312) 831-3021

From: Peter Vagi

Following please find the minutes from the June 24, 2004 Construction Meeting.

The next meeting is scheduled for 10:00 AM on Thursday July 8, 2004 at the construction trailer at the ACS Site.

If you would like a copy of these minutes or future minutes sent via e-mail please let us know.

If you do not receive all pages, or if there are any problems with this transmission, please call (312) 831-3431  
Number of pages, including cover: 4

**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR JUNE 24, 2004 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** Thursday, June 24, 2004

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS

**ATTENDEES:** Larry Campbell – BVSPC  
Pete Vagt – MWH  
Todd Lewis – MWH  
Rob Adams – MWH  
Lee Orosz – MWH  
Chris Daly – MWH  
Jon Pohl – MWH

**TOPICS:**

Health and Safety Summary

MWH continued to cleanup the leak in the sulfuric acid tank (located safely inside secondary containment) that was observed on June 7<sup>th</sup>. Prior to commencing the cleanup work, an incident form, supplied by the MWH corporate Health and Safety Officer, was completed by the plant operator. This incident form summarizes what had occurred, details the corrective actions, and identifies the health and safety procedures that would be followed. Approximately 4,000 gallons has been pumped from the sulfuric acid tank and the secondary containment area into three temporary storage tanks. Each of the temporary storage tanks also has secondary containment. There is still approximately one inch of liquid left in the sulfuric acid tank and in the secondary containment. Collecting and transferring the remaining material will require more intensive manual labor. Proper personal protective equipment (PPE) will be worn by all personnel working with the cleanup of this material.

An inspection of the sulfuric acid tank indicated that there were two leaks. One leak was at the inlet port and the other at the outlet port. MWH is reviewing the options of repairing the tank or replacing the tank.

No other health and safety issues have occurred since the last meeting on June 17<sup>th</sup>. Other activities at the site since the last meeting have included operation of the Groundwater Treatment Plant (GWTP), and operation of the Off-Site Area In-Situ Vapor Extraction (ISVE) system and the Still Bottoms Pond Area (SBPA) ISVE system.

Chicago Tank Lining completed applying an epoxy coating to the internal components of the scrubber system. Proper level B personal protection equipment (PPE) was worn by workers and the appropriate confined space permit was provided. No health and safety issues arose while the work was completed.

#### Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating at approximately 30 gallons per minute (gpm). The filter cloth on the sludge filter press was changed out on June 18<sup>th</sup>. There have been no other issues with the GWTP.

#### Off-Site Area/SBPA ISVE Systems

Thermal Oxidizer/Scrubber Unit 2 (Therm Ox 2) has been operating with no issues since the last meeting on June 17<sup>th</sup>. It is anticipated that the unit will be shut down for approximately four hours on June 25<sup>th</sup> for routine maintenance.

An order for the new heat exchanger for Thermal Oxidizer/Scrubber Unit 1 (Therm Ox 1) has been placed and the new unit is expected to arrive July 31<sup>st</sup>.

The equipment for the Off-Site ISVE system expansion is on order. MWH is waiting for submittals for the new blower. Construction of the base for the expansion equipment containment structure is anticipated to start in the next two weeks followed by the installment of the new blower system components.

The data that was collected from the SBPA ISVE wells has been internally reviewed by within MWH. The conclusions of the review indicates that the activities undertaken and data collected to date are complete and more than sufficient to fully evaluate the wells. MWH anticipates having a plan of action for dealing with wells that haven't been proven-out by the next meeting on July 8<sup>th</sup>.

MWH completed installing a product pump in SVE 61 on June 23<sup>rd</sup>. The pump will be used to pump product from the well into a 55-gallon drum. The contents of the drum will then be placed into the GWTP for treatment. MWH has two product pumps and anticipates using the pumps to clear out three or four wells on June 25<sup>th</sup>.

#### Chemical Oxidation Application

During the chemical oxidation post-application sampling, delineation sampling indicated the contamination smear zone extended further to the east than previously indicated at the corner of Colfax Ave. and Reder Rd. However, lab results indicated the extended area has lower benzene concentrations in comparison with other areas. MWH has received approval from the PRP group to collect soil gas samples in the vicinity following U.S. EPA draft guidance. MWH will submit a draft Phase I Chemical Oxidation report that will summarize the post application data and include a work plan for the soil gas sampling.

Look Ahead Schedule

June 25, 2004 through July 8, 2004	<ul style="list-style-type: none"><li>• Off-Site ISVE system and SBPA ISVE system operation</li><li>• GWTP/BWES/PGCS operation and routine maintenance</li><li>• Complete cleanup of sulfuric acid leak</li><li>• Pumping On-Site ISVE wells for fluid removal</li><li>• PSVP water level monitoring for the 2<sup>nd</sup> Quarter</li></ul>
Health and Safety Items to Monitor	<ul style="list-style-type: none"><li>• Safety issues associated with ISVE well dewatering</li><li>• Safety issues associated with the GWTP acid leak repairs</li><li>• Routine daily tailgate health and safety meetings</li></ul>

Next Construction Meeting – Thursday, July 8, 2004, 10 AM

JDP/TA/PIV

J:\2004\601 ACS\0202 MWA PM\Meeting Minutes 2004\Meeting Minutes 06-24-04.doc

(116)

2 June 04

1335 Arrive on site - cloudy  
calm 60°F

## Personnel On Site

Lee Orszag	MWH	Todd Lewis
Peter Vast	MWH	Jon Pohl
Jeff Watson	J&L	
Tim Kirkland	Austgen	
Rob Hickmab	Eagle	Dan Sheehan
Tom Hatchel	"	
Wayne Bauman	CRA	Bart Barthony
Ron Froh	ELM	Bob Ligac
Jack Kratzmeier	Arcadis	Martin Hammer
Stan Mrkwicka	TRC	Chris Harvey
Bill Bow	LFR	Wei-Lin Fong
Ken Ayers	Breit	
Fred Taylor	CRA	
Kevin Adler	USEPA	Tom Short
Larry Campbell	BUSPC	
Trenton Saffon	Rockford Blacktop Co	
Randall Garrett	Wilder Const.	
Greg Hoffman	Walsh & Kelly	

M Campbell

(117)

1405 Pre Bid Mtg for ONCA Final Cap  
Todd Lewis provided overview of  
work to be performed.Wilder manufactures a proprietary  
asphalt binder that ~~the~~ meets EPA  
permeability  $1 \times 10^{-8}$  cm/sec. They would  
supply binder to general contractors1435 All parties made site walk  
of proposed ONCA Cap area.  
Contractors were concerned about  
steep side slopes on S and NE  
areas of cap - difficult to pave.Also expressed concerns about  
steep slopes at catch basins1500 Pre bid Mtg concluded &  
Contractors left site.1515 Returned to ONCA to observe  
MWH & Eagle personnel testing  
non producing <sup>SUE</sup> wells. Used vacuum  
truck to draw larger vacuum on  
these wells. Discharge from wells routed  
to other operational wells so vapors  
would be processed by LSUE system  
Tested 11 Non producing wells  
2 wells had high water level &

M Campbell

(118)

Couldnt be tested

1545 Photo 59-1 Looking SE  
at SVE 65 DPE as MWH

removes Vacuum Connection piping

1546 Photo 59-2 Looking NW  
at Eagle removing vapor  
discharge from SVE 64

1600 MWH & Eagle demobilized vacuum  
truck & equipment from  
ONCA cap area

~~143~~

1630 Left site for day

~~Tim Campbell~~

(119)

16 June 04

0900 Arrive Onsite - overcast 70°

Personnel onsite

Lee Orosz MWH

Larry Crowder ~~Lead~~ CTL

Page Wailer CTL

Daniel Petrich IES

Torrence Jones IES

Tim Kirkland Mustang

Larry Campbell BVSRC

Ken Brand CTL

{Chicago  
Tank  
Lining Co.

0905 Met w/ Lee Orosz for briefing  
on activities at plant.

- CTL onsite to reline the interior  
1. Thermox 1. Sandblasted interior  
yesterday. Will apply coatings today  
& tomorrow
- IES onsite to remove sludge from  
lamella clarifier & replace rake  
shear pin. Also to replace  
cloth on sludge press
- Last week personnel noted leak of  
sulphuric acid. Small amount  
was transferred to 30 gal tank.  
Later in week as much as 1 ft.  
of acid leaked into secondary

Containment area. Sodium hydroxide was added to leak contents to neutralize it. Had to add water to reduce resulting heat. May have as much as 3000 gal of dilute sulphuric acid in secondary containment. pH = 1 still today.

MWH plans to locate a temporary poly tank into which it will pump acid from tank & diluted acid from secondary containment. Then they can inspect & possibly repair the failed element of the acid tank. Thereafter, the acid can be transferred to the repaired (or new) tank - and used in plant operations.

I asked Lee if the O&M Manual for plant described what to do with acid leak. It wasn't sure. Need to check.

0940 Photo 59-3 & 59-4 Looking west showing diluted Sulfuric acid in secondary Containment of Tank T-9.

Jim Campbell

0942 Photo 59-5 Looking West on N. side of tank T-9 showing diluted Sulfuric Acid in Secondary Containment

0945 Photo 59-6 Looking East showing IES cleaning sludge from Lamella clarifier

0946 Photo 59-7 Looking South into interior of Thermox #1 after being sand blasted by CTL

0947 Photo 59-8 Looking South up into interior of Thermox #1. Material at top of photo illustrates condition of Thermox #1 prior to sand blasting

0950 Photo 59-9 Looking NE showing heater used to warm up buckets of epoxy that will be used to line Thermox #1

1240 Photo 59-10 Looking S at new demister to be installed in Tank T-102

1241 Photo 59-11 Looking up at Tim (rustgen) climbing ladder to top of T-102 - Note safety harness

1242 Photo 59-12 Looking W showing Tim installing demister

Jim Campbell

(122)

in Top 1 Tank T-102. Note fall protection harness tied off to support cable.

1245 Photo 59-13. Looking W showing Tim reconnecting Vapor piping at top of T102 after installing demister

1248 Photo 59-14 Looking N on Top of ME 101 showing algae growing in L welding cell

1250 Photo 59-15 Looking S at old demister screen after removal from T-102

1253 Photo 59-16 Looking SW at gray poly tank where original dealer Sulfuric Acid was pumped. Blue drum on L is filled w acid after adding Sodium hydroxide to try to neutralize acid. But pH still  $\approx 1$

1317 Photo 59-17 Looking S as CTL mgr enters Thermo I tank Note Safety Harness.  
LMS reviewed Confined Space Entry Permit

M Campbell

(123)

1320 Photo 59-18 Looking S showing Mgr in Thermo I w Safety harness & supplied air respirator (level B)

1326 Photo 59-19 Looking S showing CTL Mgr spraying epoxy onto inside of Thermo I

1327 Photo 59-20 Looking W showing air operated epoxy pump

1329 Photo 59-21 Looking S showing CTL mgr spraying interior of Thermo I

1332 Photo 59-22 Looking S showing CTL mgr spraying epoxy on floor of Thermo I from outside

1333 Photo 59-23 Looking E showing mixing of catalyst & <sup>hardener</sup> ~~blend~~ of new batch of epoxy.

1335 Photo 59-24 Looking SW showing spraying of epoxy on front end of heat exchanger

1336 Photo 59-25 Looking SE showing spraying of epoxy on front end of heat exchanger

1339 Photo 59-26 Looking W as CTL sprays solvent thru pump & lines to clean out epoxy there from

1341 Photo 59-27 Looking S

M Campbell

(124)

showing hand application of  
epoxy to baffle plate

1400 - observed CTL break down  
& begin cleaning equipment w/  
solvent.

1430 observed ISC personnel complete  
cleaning of lamella clarifier  
and reattached access cover plate.

1500 Left site for Day

~~Handwritten signature/initials~~

(125)

17 June 2004

0930 Arrive Onsite - Cloudy Warm  
& humid, earlier showers 78°F

### Personnel On Site

Lee Orszag	MWH
Lawyer Crowder	CTL (Chl. Tank Lining)
Nate Nailer	CTL
Dan Petrich	IES
Torrence Jover	IES
Tim Kivlenand	Austgen
Larry Campbell	BUSPC

0940 Photo 60-1 Looking W showing  
Thermox 1 Manway Hatch Cover  
Coated today (manually) with epoxy  
coating. Front end of heat exchanger  
in background.

0941 Photo 60-2 looking S into  
Manway of Thermox 1 showing recently  
coated & installed baffle plate

0942 Photo 60-3 looking up into  
interior of Thermox 1 showing recoated  
surface on lower 7' and uncoated  
portion above

*Handwritten signature: J. Campbell*

(126)

0948 Talked to CTL lead Tech.  
Holiday testing of new coating  
on interior of Thormax 1 had  
indicated some pin holes in the  
coating. He had hand applied  
epoxy to those locations (not  
seams and around manway  
opening). He had reinstalled  
the recently coated baffle plate  
inside Thormax 1. Thickness  
of epoxy had been acceptable since  
met the specified thickness.

0950 CTL personnel & equipment  
left site.

1006 Construction Meeting  
Personnel Present

Lee Orosz	MWH	onsite
Larry Campbell	BUSPC	"
Pete Vogt	MWH	Mike-plans
Rob Adams	"	"
Todd Lewis	"	"
Chris Daly	"	"
Mark Travers	PRP Gp	"
Kevin Adler	EPA	"

JM Campbell

(127)

- H&S since last mty 2 wk ago
  - Chicago Tank Lining Co onsite  
this week to apply epoxy coating  
to interior of Thormax 1 scrubber  
This was a confined space entry  
event. (LWC noted that confined  
space entry permit had been completed  
& worker inside scrubber had Level B  
supplied air & escape rope attached  
to body harness.)
  - Independent Envtl. Services onsite  
this week to remove sludge from  
lamella clarifier so could replace  
broken shear pin. (LWC noted  
that IES personnel wore Level C  
air purifying respirators during  
this work.)
  - Sulfuric acid tank leaked into  
secondary containment this week.  
Some acid leakage was pumped  
into temp. poly tank (outside  
secondary containment). More  
acid had leaked. ~~This was from~~  
MWH attempted to neutralize  
acid by adding liquid Sodium

JM Campbell

hydroxide. Because of heat generated, MWIT cooled liquid w/ water. Now  $\approx 2'$  diluted acid in secondary containment area.

MWIT has ordered a temp. poly storage tank into which it can pump the acid & diluted acid from original leaking tank and its secondary containment.

- LMC inquired if the O&M Manual for GWTP described how to handle leak of acid. MWIT personnel were not sure but would find out. Todd Lewis stated that MWIT did not review the O&M Manual prior to neutralizing or diluting the acid.

#### • GWTP

operating at 30 gpm

Down yesterday  $\approx 6$  hr while lamella clarifier was cleaned. Broken shear pin in lamella clarifier was replaced.

Mr Campbell

MWIT had performed regular maint. activities at plant, including cleaning, lubrication, equipment and replacement of demister on Tank T102

#### • ISVE Systems

- Both OFCA & ONCA systems are working feeding vapors to thermux 2, which is working well.

OFCA ISVE pumping extracting from 17 wells (same for long time)

ONCA pumping from 12 wells, but still having difficulty extracting vapors from some wells.

Recently did some testing of crusty wells. Used vacuum truck to

apply greater vacuum at 11 wells.

- Some responds to higher vacuum others didn't.

- observed that water level rose as vacuum was applied

- MWIT plans to review its findings this ~~week~~ week w/ informal experts.

- MWIT may overdock a well to inspect field conditions of wells.

Mr Campbell

MWH has ordered the new heat exchanger for Thermox 1  
Scheduled to arrive by July 31

MWH took old heat exchanger to Global to use for measurements.

- MWH plans to switch to fixed sampling using PID only (discontinue FID usage). MWH has sent a memo to Agencies & BDU describing this action.

#### - OFCA ISUE Upgrade

- MWH has ordered the blower system and container shore to enhance to OFCA ISUE system capacity

- MWH has ordered a new knockout tank for installation at GUTP @ Thermox 1 area.

#### • SBPA Final Cover

- MWH held the SBPA Final cover prebid mtg on June 2 & have received est proposals.
- MWH is evaluating proposals + working on technical + contracting issues. MWH

Jim Campbell

expects to award contract w/in 2 weeks. Work will not occur till late July.

- Prior to paving need to

- final grading of gravel

- Compaction Testing

- install concrete pad around

- wells & piles penetrating the cap.

#### • Chemox Treatment & off site plume

MWH drilling & testing has found that smear zone extends E of

1st house on Redox Road. MWH concerned that vapor from product in smear zone may have seeped into house (basement)

MWH using EPA guidance

document to assess the potential

MWH plans to discuss w/ RPP group in Conf. Call. next Thursday.

EPA concerned that modeling may not be sufficient & may need to test the basement for vapors.

#### • GW Monitoring

March 2004 monitoring report

Jim Campbell

Will be issued soon.

- Final version of SBPA Interim Cover CCR to be issued soon
- Access Pathways in Marsh  
Permission not yet received.  
But Barbara has been out of Country on Vacation & may leave on her desk.
- Look Ahead
  - IES is changing filter cloth on Filter Press today
  - Pumping water in flooded ONCA ISVE wells
  - Maintenance at GWTP & ISVE bldgs
  - GW level measurements in 1-2 weeks
  - OFCA ISVE System upgrade starting w/ 2-3 wks to prepare bldg location - remove topsoil, place gravel
  - prepare to layout conc. pads in SBPA ISVE area
- H&S Lookahead  
IES wearing respirators

Jim Campbell

while replacing filter cloth

- Hold tailgate mtgs w/ contractors
- Acid tank leak fix

(Temp tank arrived just now)  
Pump dilute acid into Temp Tank.

(BUSEC commented that MWH needs to prepare procedure for this operation or include a Job hazard analysis. Also assess problems that might result from leak of temp. acid storage tanks w/o secondary containment.)

- Next Meeting Thur

June 24 at 10 AM

1050 Mtg over

1053 Photo 60-4 Looking S at ~~new~~ rented 2450 gal acid storage tank

1054 Photo 60-5 Looking NW at new tank

1105 Photo 60-6 Looking S at new tank w/ access ladder.

1110 Left site for day

Jim Campbell

(134)

24 June 2004

0930 Arrive on site. Clear Cool 67°F

Personnel On Site

Lee Orosz MWH

Tim Kirkland Austgen

Kevin Foley Simalabs

Mike Chemurthi "

Larry Campbell BUSPC

0948 Photo 60-7 Looking SW at  
new group of Temp. Acid Storage  
tanks. Note secondary containment  
added recently

0950 Photo 60-8 Looking W on  
S side of leaking Sulfuric Acid  
tank after diluted acid pumped  
from secondary containment

0950 Photo 60-9 Looking W on  
N side of Sulfuric Acid tank after  
diluted acid pumped from secondary  
containment. Note  $\approx 2'$  depth  
of diluted acid via marks on tank

0952 Photo 60-10 Looking S down  
into secondary containment of  
additional <sup>Temp.</sup> Acid storage tanks

Jim Campbell

(135)

Note some spillage being absorbed  
by dry absorbent (note dark color =  
wet).

1000 Construction Mtg

Personnel at Mtg

Lee Orosz MWH Site

Pete Vagt MWH Offic - phone

Rob Adams " "

Todd Lewis " "

John Pohl " "

Larry Campbell BUSPC Site

### • HESafety

- No issues since last weeks mtg.
- Acid Tank leak response - prepare  
incident report of the leak &  
planned actions. Incident  
report & MSDS constitute a  
Job Hazard Analysis
- MWH Corp H&S mgr suggested they  
prepare procedure for inclusion  
in O&M Manual w/ regard to  
planned activities in event of  
another acid or base leak.

Jim Campbell

(136)

### • Acid Tank Leak Response

- obtained 3 additional 300 gal <sup>poly</sup> tanks (Temporary) for Temp storage of diluted acid. These tanks of 2500 gal. Temp. poly tank delivered last Thur. now installed inside temporary secondary containment inside GWTP bldg.
- MWH pumped Acid from Temp 400 gal tank into other temp. tanks & relocated 400 gal tank into Secondary Containment area. Then pumped diluted acid from original tank and secondary Containment into Temp. poly tanks. - total of  $\approx$  4000 gal.
- MWH observed leakage of original tank from Stainless Steel Valves at inlet and outlet fittings near bottom of side of tank.
- MWH evaluating future actions but may replace existing tank with a newer model + smaller acid tank.
- If to replace, MWH will cut hole in tank to remove remaining 1" of acid from tank.

Jim Campbell

(137)

- GWTP - operating at 30 gpm w/ no problems. Filter Cloth & sludge press was ~~replaced~~ replaced last Friday.

### • ISVE Systems

- Both OFCA and ONCA SBPA ISVE systems are operating w/ vapors being picked up in Thermox 2.
- Will perform maintenance on thermox 2 tomorrow so system will be down.
- MWH ordered GW pumps, <sup>& controllers</sup> to install in mwhs in ~~high~~ high GW level. One pump was added in mw 61. ~~and pumped to the~~ Pump discharges routed out of well casing such that water can be removed w/o having to open ~~the~~ wells and be exposed to vapors. Will be discharged into 55 gal drum and transferred to Tank T6 in GWTP.
- MWH evaluating poor performance of ONCA SBPA ISVE wells. Internal MWH Conference concluded they have about exhausted assessment of problem. Expect to have a plan of action by next <sup>mtg.</sup>

Jim Campbell

(138)

## • Look Ahead

- Acid Tank remediation  
plan to inspect tank carefully  
will also inspect NaOH tank.
- continued operation of GUPP  
& ISUE systems
- South area plume - continued  
to evaluate product smear zone -  
probably reaches 1<sup>st</sup> residence on  
Red Rd. Will need to perform  
tests to assess impact to  
indoor air quality at first  
home on Red Road.
- MWH is following EPA Guidance  
Document to develop plan of action  
for Smear Zone Vapor Issue. Will  
probably take a series of soil  
gas samples to see problems.
- MWH plans to prepare
  - Chemox Report
  - Work Plan for soil gas sampling  
w/ next couple of weeks
- H&S Lookover  
Acid Tank Remediation  
ISUE well water pumping  
Jim Campbell

(139)

Will also inspect caustic tank

Next call in 2 wk - July 8 @ 10 AM  
1035 Mtg over.

1045 left site for day

Jim Campbell



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #1

Date: 06-02-04 Time: 15:45

Photographer: Larry Campbell

Description: Photo facing southeast showing MWH removing vacuum connection piping from ONCA SBPA ISVE system well SVE-65.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #2

Date: 06-02-04 Time: 15:46

Photographer: Larry Campbell

Description: Photo facing northwest showing Eagle Services removing vapor discharge piping from ONCA SBPA ISVE system well SVE-64.

Site: American Chemical Service, Inc.

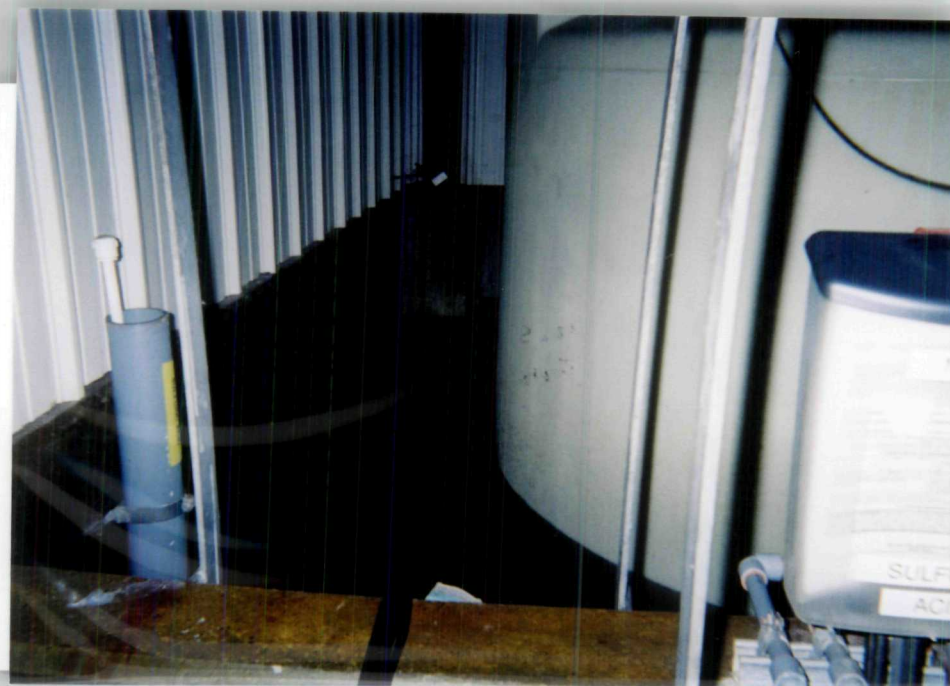
Proj. #: 46526

Roll: 59 Photo #3

Date: 06-16-04 Time: 09:40

Photographer: Larry Campbell

Description: *Flash didn't fire, so photo didn't develop.*



Site: American Chemical Service, Inc.

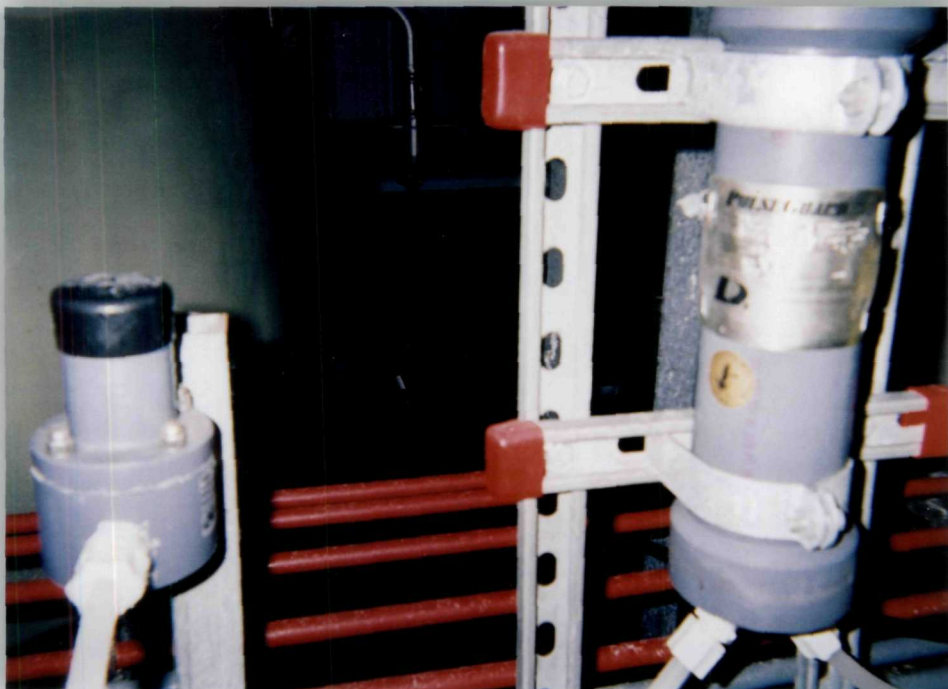
Proj. #: 46526

Roll: 59 Photo #4

Date: 06-16-04 Time: 09:40

Photographer: Larry Campbell

Description: Photo facing west on south side of tank T-9 showing the diluted sulfuric acid (black) in the secondary containment.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #5

Date: 06-16-04 Time: 09:42

Photographer: Larry Campbell

Description: Photo facing west on the north side of tank T-9 showing diluted sulfuric acid in the secondary containment.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #6

Date: 06-16-04 Time: 09:45

Photographer: Larry Campbell

Description: Photo facing east showing IES cleaning sludge from the lamella clarifier.



Site: American Chemical Service, Inc.

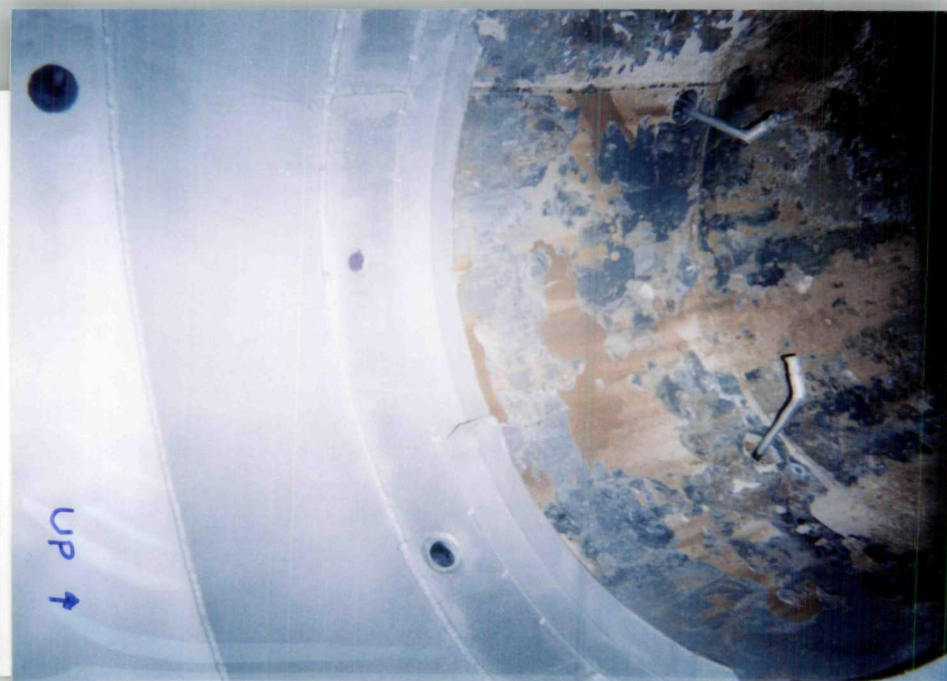
Proj. #: 46526

Roll: 59 Photo #7

Date: 06-16-04 Time: 09:46

Photographer: Larry Campbell

Description: Photo facing south showing the interior of the Durr thermal oxidizer unit 1 scrubber after being sand blasted by CTL.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #8

Date: 06-16-04 Time: 09:47

Photographer: Larry Campbell

Description: Photo looking up into the interior of the Durr thermal oxidizer unit 1 scrubber. Material at top of photo illustrates interior of scrubber stack before sand blasting.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #9

Date: 06-16-04 Time: 09:50

Photographer: Larry Campbell

Description: Photo facing northeast showing the heater used to warm up buckets of the epoxy that will be used to line the Durr thermal oxidizer unit 1 scrubber.

Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #10

Date: 06-16-04 Time: 12:40

Photographer: Larry Campbell

Description: Photo facing south showing the new demister that will be installed into tank T-102.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #11

Date: 06-16-04 Time: 12:41

Photographer: Larry Campbell

Description: Photo looking up at Tim Kirkland climbing the ladder to the top of tank T-102 to install the new demister.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #12

Date: 06-16-04 Time: 12:42

Photographer: Larry Campbell

Description: Photo facing west showing Tim Kirkland installing the demister in the top of tank T-102. Note the fall protection harness tied off to the support cable.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #13

Date: 06-16-04 Time: 12:45

Photographer: Larry Campbell

Description: Photo facing west showing Tim Kirkland reconnecting the vapor piping at the top of tank T-102 after installing the demister.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #14

Date: 06-16-04 Time: 12:48

Photographer: Larry Campbell

Description: Photo facing northeast from the top of ME-101 showing the algae growth in the left holding cell.



Site: American Chemical Service, Inc.

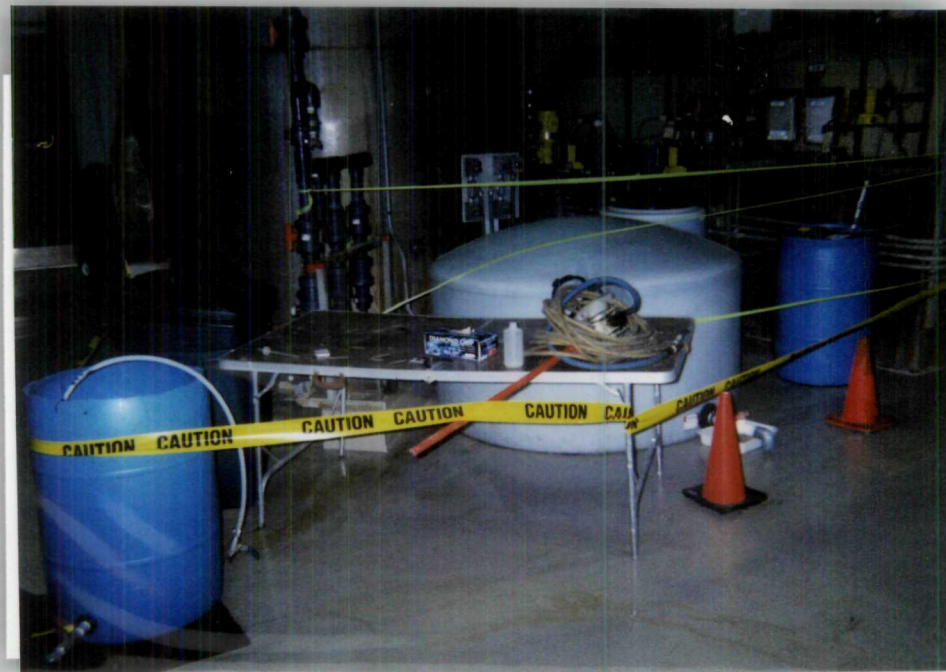
Proj. #: 46526

Roll: 59 Photo #15

Date: 06-16-04 Time: 12:50

Photographer: Larry Campbell

Description: Photo facing south showing the old demister screen after removal from tank T-102.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #16

Date: 06-16-04 Time: 12:53

Photographer: Larry Campbell

Description: Photo facing southwest showing the light gray poly tank into which the leaked sulfuric acid had been pumped. Blue drum on left contains acid after adding NaOH.



Site: American Chemical Service, Inc.

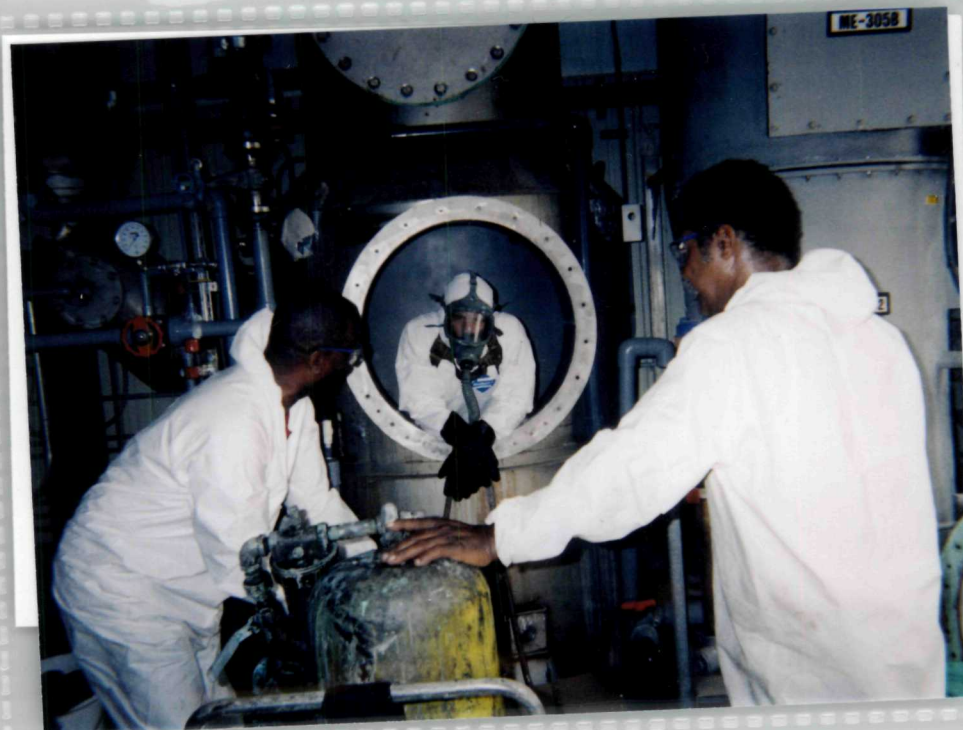
Proj. #: 46526

Roll: 59 Photo #17

Date: 06-16-04 Time: 13:17

Photographer: Larry Campbell

Description: Photo facing southwest showing CTL entering the Durr thermal oxidizer unit 1 scrubber. Note safety harness.



Site: American Chemical Service, Inc.

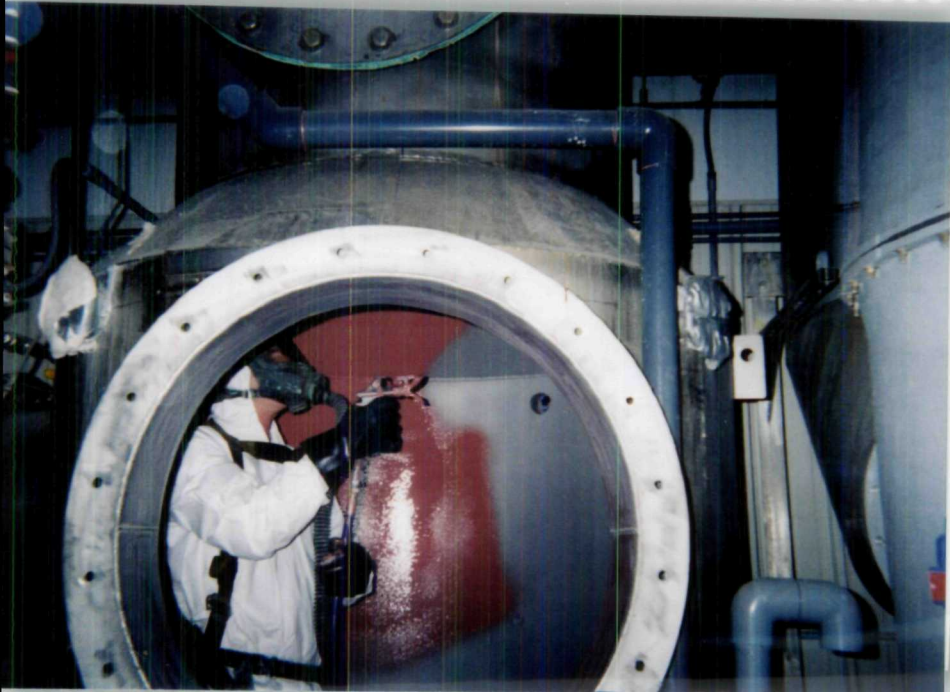
Proj. #: 46526

Roll: 59 Photo #18

Date: 06-16-04 Time: 13:20

Photographer: Larry Campbell

Description: Photo facing south showing CTL in the Durr thermal oxidizer unit 1 scrubber with safety harness and supplied air respirator.



Site: American Chemical Service, Inc.  
 Proj. #: 46526

Roll: 59

Photo #19

Date: 06-16-04

Time: 13:26

Photographer: Larry Campbell

Description: Photo facing south showing CTL spraying epoxy coating (rust color) onto the inside of the Durr thermal oxidizer unit 1 scrubber.

Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59

Photo #20

Date: 06-16-04

Time: 13:27

Photographer: Larry Campbell

Description: Photo facing west showing the air operated epoxy pump.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #21

Date: 06-16-04 Time: 13:29

Photographer: Larry Campbell

Description: Photo facing south showing CTL spraying epoxy on the interior of the Durr thermal oxidizer unit 1.

Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #22

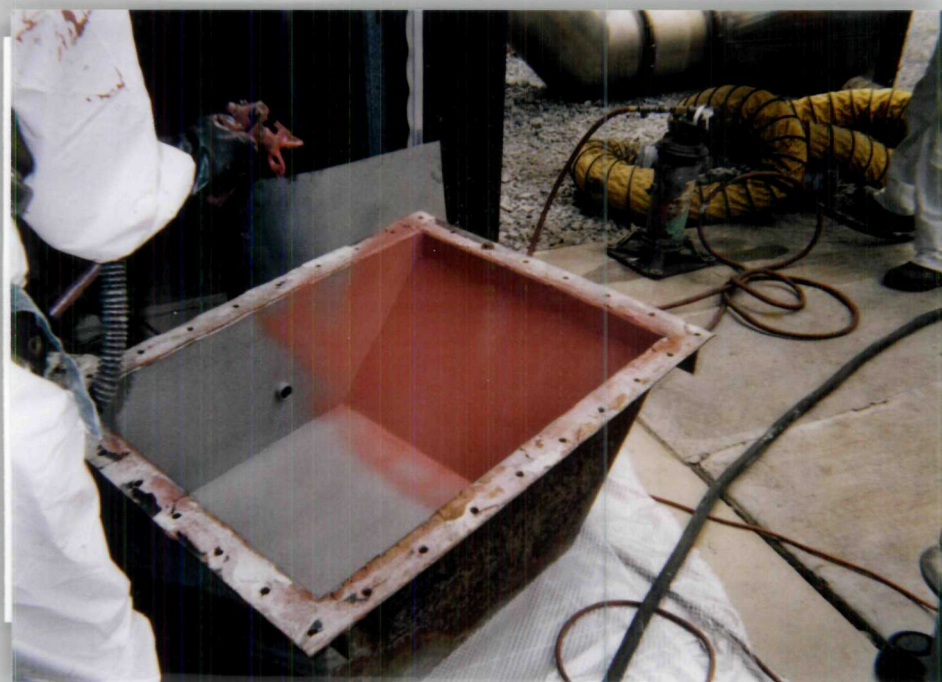
Date: 06-16-04 Time: 13:32

Photographer: Larry Campbell

Description: Photo facing south showing CTL spraying epoxy onto the floor of the Durr thermal oxidizer unit 1 scrubber from the exterior.



Site: American Chemical Service, Inc.  
 Proj. #: 46526  
 Roll: 59 Photo #23  
 Date: 06-16-04 Time: 13:33  
 Photographer: Larry Campbell  
 Description: Photo facing east showing the mixing of the catalyst and hardener for a new batch of epoxy.



Site: American Chemical Service, Inc.  
 Proj. #: 46526  
 Roll: 59 Photo #24  
 Date: 06-16-04 Time: 13:35  
 Photographer: Larry Campbell  
 Description: Photo facing southwest showing spraying of epoxy on the front end of the Durr thermal oxidizer unit 1 scrubber.



Site: American Chemical Service, Inc.  
 Proj. #: 46526  
 Roll: 59 Photo #25  
 Date: 06-16-04 Time: 13:36  
 Photographer: Larry Campbell  
 Description: Photo facing southeast showing spraying of epoxy on the front end of the Durr thermal oxidizer unit 1 scrubber.



Site: American Chemical Service, Inc.  
 Proj. #: 46526  
 Roll: 59 Photo #26  
 Date: 06-16-04 Time: 13:39  
 Photographer: Larry Campbell  
 Description: Photo facing west showing CTL spraying solvent through the pump and lines to clean out the epoxy.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 59 Photo #27

Date: 06-16-04 Time: 13:41

Photographer: Larry Campbell

Description: Photo facing south showing hand application of epoxy to the baffle plate located in the Durr thermal oxidizer unit 1 scrubber.



Site: American Chemical Service, Inc.

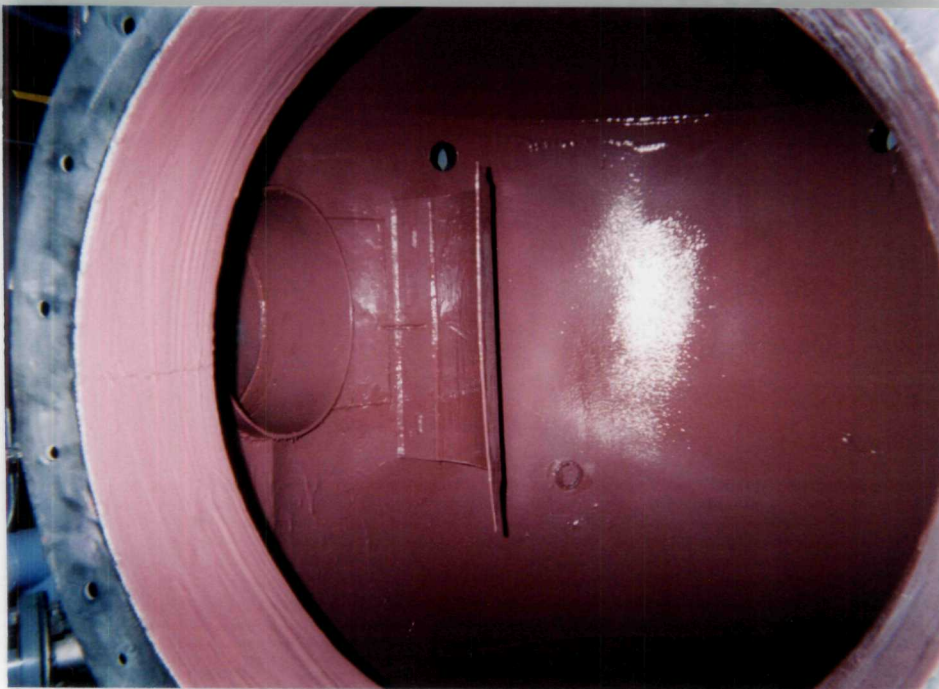
Proj. #: 46526

Roll: 60 Photo #1

Date: 06-17-04 Time: 09:40

Photographer: Larry Campbell

Description: Photo facing west showing the Durr thermal oxidizer unit 1 scrubber manway hatch cover coated with epoxy coating. Front end of scrubber in background.



Site: American Chemical Service, Inc.

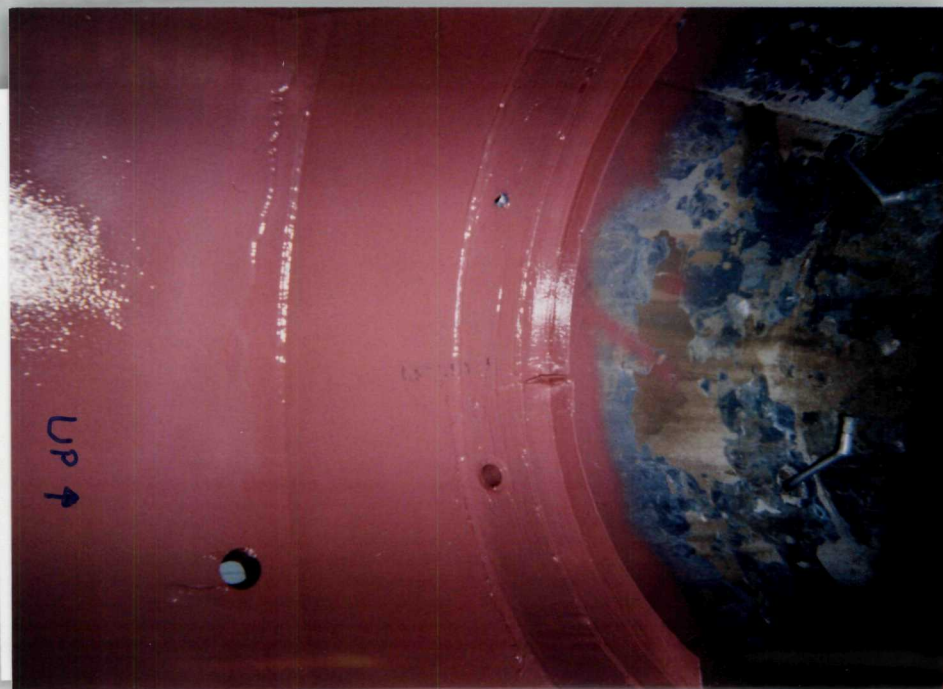
Proj. #: 46526

Roll: 60 Photo #2

Date: 06-17-04 Time: 09:41

Photographer: Larry Campbell

Description: Photo facing south through the manway into the Durr thermal oxidizer unit 1 scrubber showing the recently epoxy coated and installed baffle plate.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 60 Photo #3

Date: 06-17-04 Time: 09:42

Photographer: Larry Campbell

Description: Photo looking up into the interior of the Durr thermal oxidizer unit 1 scrubber showing the epoxy coated surface on the lower 7 ft and the uncoated portion above.



Site: American Chemical Service, Inc.

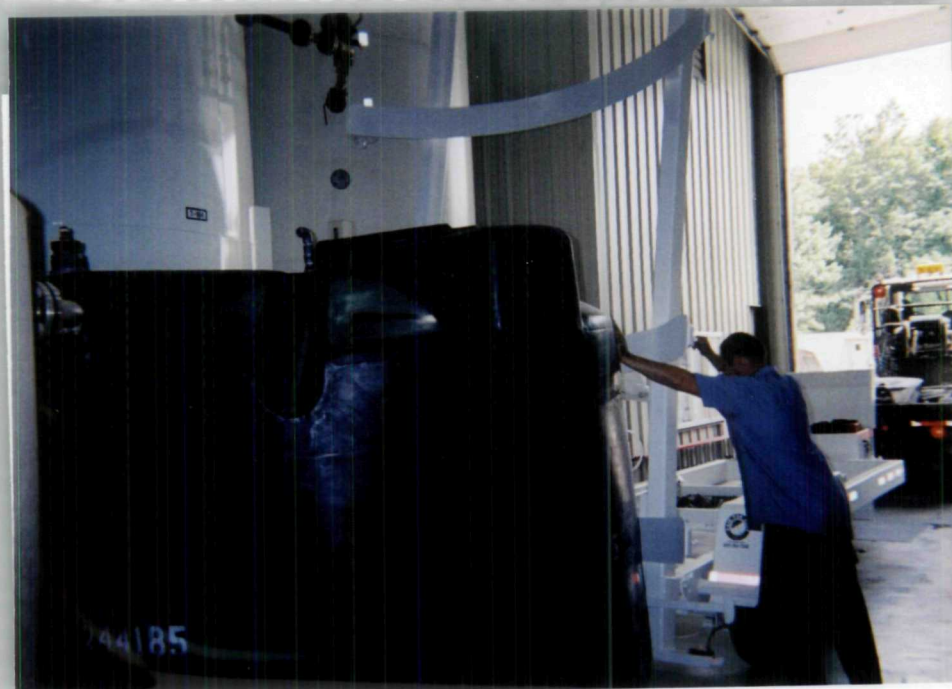
Proj. #: 46526

Roll: 60 Photo #4

Date: 06-17-04 Time: 10:53

Photographer: Larry Campbell

Description: Photo facing south at the rented 2,450 gallon tank for temporary storage of sulfuric acid (being unloaded from transport trailer)..



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 60 Photo #5

Date: 06-17-04 Time: 10:54

Photographer: Larry Campbell

Description: Photo facing northwest showing the rented poly tank for temporary storage of sulfuric acid.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 60 Photo #6

Date: 06-17-04 Time: 11:05

Photographer: Larry Campbell

Description: Photo facing south showing the rented poly tank for temporary storage of sulfuric acid with an access ladder.



Site: American Chemical Service, Inc.

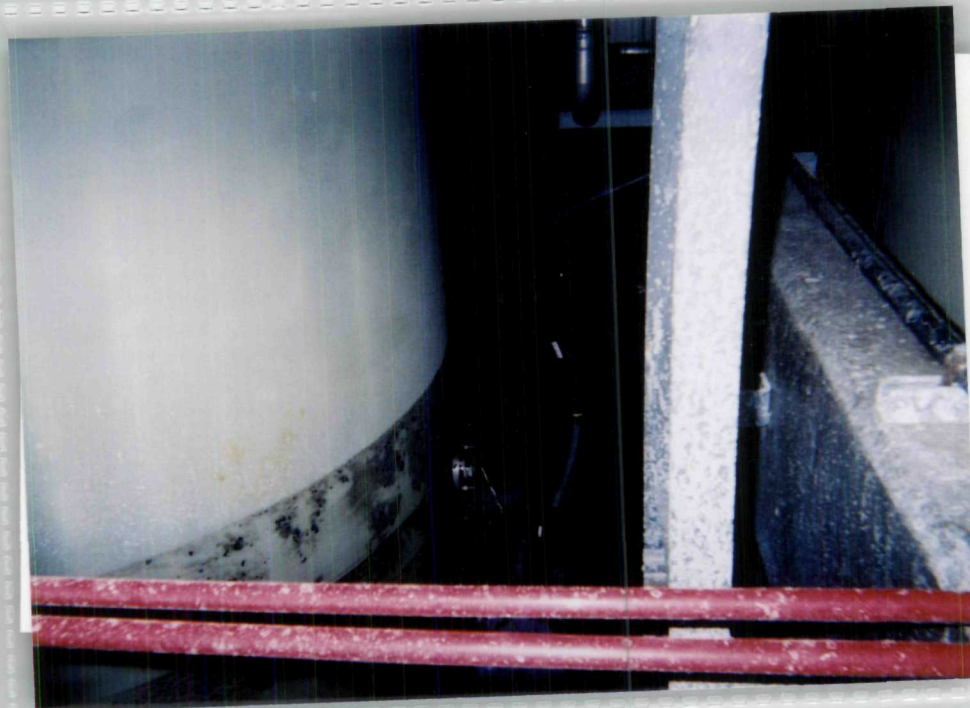
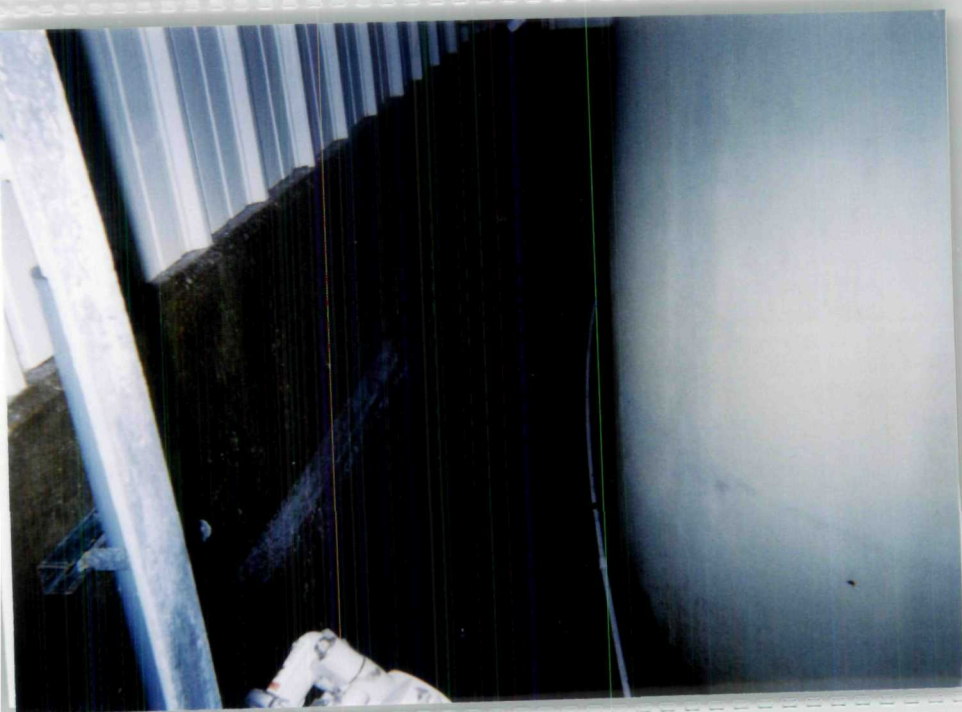
Proj. #: 46526

Roll: 60 Photo #7

Date: 06-24-04 Time: 09:48

Photographer: Larry Campbell

Description: Photo facing southwest showing a new group of temporary acid storage tanks. Note the secondary containment that has been added recently.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 60 Photo #8

Date: 06-24-04 Time: 09:50

Photographer: Larry Campbell

Description: Photo facing west on the south side of the leaking sulfuric acid storage tank after diluted acid was removed from the secondary containment.

Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 60 Photo #9

Date: 06-24-04 Time: 09:50

Photographer: Larry Campbell

Description: Photo facing west on the north side of the sulfuric acid tank after diluted acid was pumped from the secondary containment. Note approximately 2 feet deep.



Site: American Chemical Service, Inc.

Proj. #: 46526

Roll: 60 Photo #10

Date: 06-24-04 Time: 09:52

Photographer: Larry Campbell

Description: Photo facing south down into the secondary containment for the temporary poly tanks. Note some spillage being absorbed by dry absorbant.